Response To Office Action Dated April 20, 2005

As shown in Figures 2 and 3, the trailing edge cavity 20 may be formed from a serpentine cooling path 42 formed from at least a first inflow section 44 and a first outflow section 46. The first inflow section 44 may include one or more inlet orifices 48 for receiving a cooling fluid from a shroud assembly 39. In at least one embodiment, the first inflow section 44 may include only a single inlet orifice 48. A first turn 50 may couple the first inflow section 44 with the first outflow section 46 and provide a smooth pathway for cooling fluids to flow through. The first turn 50 may be formed from a continuous wall, as shown in Figure 2. In at least one embodiment, the serpentine cooling path 42 may include a second inflow section 52, as shown in Figure 2, forming a three-pass serpentine cooling path for directing cooling fluids towards the manifold assembly 41 to which the second end 40 of the vane 22 may be coupled. The turbine vane 10 is not limited to having a three-pass serpentine cooling path 42, but may have other numbers of passes. The trailing edge cavity 20 may also include one or more exhaust orifices 54 in the trailing edge 36 for exhausting cooling fluids from the turbine vane 10. The serpentine cooling path 42 may also include a plurality of trip strips 55 for mixing the cooling fluid as the cooling fluid flows through the serpentine cooling path 42.

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